

SEQUENCE LISTING

*SV*  
*BZ*

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Bout, Abraham

<120> PACKAGING SYSTEMS FOR HUMAN RECOMBINANT ADENOVIRUS TO  
BE USED IN GENE THERAPY

<130> 4075US

<140>

<141>

<150> 09/065,752

<151> 1998-04-24

<160> 69

<170> PatentIn Ver. 2.0

<210> 1

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: blunt,  
double-stranded oligo-linker containing a PacI  
site.

<400> 1

aattgtctta attaaccgct taa

23

<210> 2

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide used to create oligo-linker of  
SEQ. ID. NO.: 1.

<400> 2

aattgtctta attaaccgc

19

<210> 3

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide used to create oligo-linker of  
SEQ. ID. NO.: 1.

<400> 3

aattgcggtt aattaagac

19

<210> 4  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer LTR-1.

<400> 4  
ctgtacgtac cagtgcactg gcctaggcat ggaaaaatac ataactg 47

<210> 5  
<211> 64  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer LTR-2.

<400> 5  
gcggatcctt cgaaccatgg taagcttggt accgctagcg ttaaccgggc gactcagtca 60  
atcg 64

<210> 6  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer HSA1.

<400> 6

gcccacat gggcagagcg atggtggc

28

<210> 7

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer HSA2.

<400> 7

gttagatcta agcttgcga catcgatcta ctaacagtag agatgtagaa

50

<210> 8

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer used to

amplify a sequence corresponding to sequences

28511 to 28734 in wt Ad5 DNA.

<400> 8

gggttattagg ccaaaggcgc a

21

156471 2023-06-09  
<210> 9  
<211> 33  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer used to  
amplify a sequence corresponding to sequences  
28511 to 28734 in wt Ad5 DNA.

<400> 9  
gatcccatgg aagcttgggt ggcgacccca gcg 33

<210> 10  
<211> 35  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer used to  
amplify a sequence corresponding to sequences  
29217 to 29476 in wt Ad5 DNA.

<400> 10  
gatcccatgg ggatccctta ctaagttaca aagcta 36

<210> 11  
<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer used to amplify a sequence corresponding to sequences 29217 to 29476 in wt Ad5 DNA.

<400> 11

gtcgctgtag ttggactgg

19

<210> 12

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer used to generate 695 bp PCR product and plasmid construct of of Example 2.

<400> 12

cgataagctt aattcctttg tgttt

25

<210> 13

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer used to generate 695 bp PCR product and plasmid construct of of Example 2.

<400> 13

cttaggttaac ccagtagatc cagaggagtt cat

33

<210> 14

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
single-stranded DNA molecule containing the HP/asp sequence.

<400> 14

gtacactgac ctatgtccgc ccgggcaaag cccgggcggc actag

45

<210> 15

<211> 63

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer  
PolyL-ITR.

<400> 15  
aactgcagat ctatcgatac tagtcaattg ctcgagtcta gactacgtca cccgccccgt 60  
tcc 63

<210> 16  
<211> 39  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer  
ITR-BSN.

<400> 16  
cgggatccgt cgacgcggcc gcatcatcaa taatataacc 39

<210> 17  
<211> 10  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: nucleotide  
sequence used to ligate 6354 bp blunt fragment to  
a phosphorylated NsiI linker.

<400> 17  
cgatgcattcg 10

<210> 18  
<211> 32  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer used in  
PCR reaction performed on pMLP.nlsLacZ template.

<400> 18  
gggggtggcca gggtaacctt aggctttgc aa

32

<210> 19  
<211> 29  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer used in  
PCR reaction performed on pMLP.nlsLacZ template.

<400> 19  
ggggggatcc ataaacaagt tcagaatcc

29

<210> 20  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide used to create a synthetic linker  
with HindIII and XbaI overhang.

<400> 20

agcttgaatt cccgggtacc t

21

<210> 21

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide used to create a synthetic linker  
with HindIII and XbaI overhang.

<400> 21

ctagaggtac ccgggaattc a

21

<210> 22

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

ITR-EPH.

<400> 22

cggaaattctt aatatagtt acatcatcaa taatataacc

39

<210> 23

<211> 66

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

ITR-pIX.

<400> 23

acggcgcgcc ttaagccacg cccacacatt tcagttacgtt ctagtctacg tcacccgccc 60

cgttcc

66

<210> 24

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

Ad3'/Forw.

<400> 24

cggaaattcat caggataggg cggtgg

26

<210> 25  
<211> 44  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer  
Ad3' /Rev.

<400> 25  
cgggatccta tcgatattta aatgttttag ggcggagtaa cttg

<210> 26  
<211> 37  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer  
PA-pIX1.

<400> 26  
taa~~g~~ccacta ~~g~~tac~~g~~tact~~g~~ aaat~~g~~tat~~g~~ q~~c~~at~~g~~ac

<210> 27  
<211> 43  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer  
PA-pIX2.

<400> 27

ttaagccacg cccacacatt tcagtacgta ctagtggctt aat

43

<210> 28

<211> 10

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
oligonucleotide used to create a linker with a  
SalI site and EcoRI overhang.

<400> 28

ttaagtgcac

10

<210> 29

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: linker used to  
change the EcoRI site in pAd5/Clip to a PacI site.

<400> 29

aattgtctta attaaccgca att

23

<210> 30

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide PLL-1 annealed to oligonucleotide  
of SEQ. ID. NO.: 31 to create a linker used in  
generation of AdMire plasmid.

<400> 30

gccatcccta ggaagcttgg taccggtgaa ttgcgttagcg ttaacggatc ctctagacga 60  
gatctgg 67

<210> 31

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide PLL-1 annealed to oligonucleotide  
of SEQ. ID. NO.: 31 to create a linker used in  
generation of AdMire plasmid.

<400> 31

ccagatctcg tctagaggat ccgttaacgc tagcgaattc accggtagcca agtttcctag 60  
ggatggc 67

<210> 32

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

CMVplus.

<400> 32

gatcggtacc actgcagtgg tcaatattgg ccattagcc 39

<210> 33

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

CMVminA.

<400> 33

gatcaagctt ccaatgcacc gttcccgcc 29

<210> 34  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer  
(Delta)DE2A.SnaBI.

<400> 34  
ggcgtacgta gccctgtcga aag

23

<210> 35  
<211> 35  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer  
(Delta)DE2A.DBP-start.

<400> 35  
ccaatgcatt cgaagtactt ctttcctta taggc

35

<210> 36  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer  
(Delta)DE2A.DBP-stop.

<400> 36

ccaatgcata cggcgacac gg

22

<210> 37

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer  
(Delta)DE2A.BamHI.

<400> 37

gaggtggatc ccatggacga g

21

<210> 38

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Ad101

<400> 38

tgattcacat cggtcagtgc

20

DECODED EMBODIMENT  
  
<210> 39  
<211> 42  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:  
oligonucleotide NY-up.

<400> 39  
cgacatatgt agatgcatta gtttgttta tgtttcaacg tg

42

<210> 40  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:  
oligonucleotide NY-down.

<400> 40  
ggagaccact gccatgtt

18

<210> 41  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide (Delta)Dhex1 used in PCR  
amplification of hexon flanking sequences.

<400> 41

cctggtgctg ccaacagc

18

<210> 42

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide (Delta)Dhex2 used in PCR  
amplification of hexon flanking sequences.

<400> 42

ccggatccac tagtgaaag cgggcgcgcg

30

<210> 43

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide (Delta)Dhex3 used in PCR  
amplification of hexon flanking sequences.

<400> 43

ccggatccaa ttgagaagca agcaacatca acaac

35

<210> 44

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide (Delta)Dhex4 used in PCR  
amplification of hexon flanking sequences.

<400> 44

gagaaggcgttggaggct

18

<210> 45

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer DP5-F.

<400> 45

ctgttgctgc tgctaatagc

20

<210> 46  
<211> 32  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer DP5-R.

<400> 46

cgcgatcct gtacaactaa gggaaataca ag

32

<210> 47

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer DP3-F

<400> 47

cgcgatccc ttaaggcaag catgtccatc ctt

33

<210> 48

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer DP3-3R

<400> 48

aaaacacgtt ttacgcgtcg accttgc

27

<210> 49

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide used to create a double stranded  
linker.

<400> 49

aattgcggcc gc

12

<210> 50

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Ea-1.

<400> 50

cgtgtagtgt atttataaccc g

21

1541234560  
<210> 51  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer Ea-2.

<400> 51

tcgtcactgg gtggaaagcc a 21

<210> 52  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer Ea-3.

<400> 52

tacccgcccgt cctaaaatgg c 21

<210> 53  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer Ea-5.

054150 = E 1234567890  
<400> 53

tggacttgag ctgtaaacgc

20

<210> 54

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Ep-2.

<400> 54

gcctccatgg aggtcagatg t

21

<210> 55

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Eb-1.

<400> 55

gcttgagccc gagacatgtc

20

<210> 56

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Eb-2

<400> 56

ccccctcgagc tcaatctgta tctt

24

<210> 57

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer SV40-1

<400> 57

gggggatccg aacttgttta ttgcagc

27

<210> 58

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer SV40-2

<400> 58

gggagatcta gacatgataa gatac

25

<210> 59  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Ad5-1.

<400> 59

gggagatctg tactgaaatg tgtggc

27

<210> 60  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer Ad5-2.

<400> 60

ggaggctgca gtctccaacg gcgt

24

<210> 61  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer ITR1.

<400> 61

gggggatcct caaatcgtca cttccgt

27

<210> 62

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer ITR2.

0  
1  
2  
3  
4  
5  
6  
7  
8  
9  
"  
"

<400> 62

ggggtctaga catcatcaat aatatac

27

<210> 63

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

PCR/MLP1.

<400> 63

ggcgaattcg tcgacatcat caataatata cc

32

<210> 64

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

PCR/MLP2.

<400> 64

ggcgaattcg gtaccatcat caataatata cc

32

<210> 65

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

PCR/MLP3.

<400> 65

ctgtgtacac cggcgca

17

<210> 66

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

HP/asp1.

<400> 66

gtacactgac ctagtgcgc ccggaaagc cgggcggca ctaggtcag

49

<210> 67

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

HP/asp2.

<400> 67

gtacctgacc tagtgcgc cggcttgc cgggcggca ctaggtcagt

50

<210> 68

<211> 55

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

HP/clal.

<400> 68

gtacattgac ctagtgcgc ccggcaaag cccggcggc actaggtaa tcgat

55

<210> 69  
<211> 54  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer  
HP/cla2.

<400> 69  
gtacatcgat tgacctagtg ccgccccgggt ttgccccgggc ggcactaggt caat 54

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